ROCK BOND

ROCKBOND SCP LTD

FORMULATORS, MANUFACTURERS AND CONSULTANTS OF SPECIAL CONCRETE PRODUCTS

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ROCKBOND STAINLESS STEEL FIBRES

DESCRIPTION:

ROCKBOND STAINLESS STEEL FIBRES (RB SSF) are strong, inert, monofilament stainless steel fibres specially designed to improve the hardened properties of cementitious materials. Concrete, mortars, renders and floor screeds harden to produce materials that are greater in tension and have a greater resistance to shear, wear and tear, impact and abrasion. The fibres are also used to reduce or eliminate problems associated with the drying out of concrete, shrinkage, cracking and crazing. The fibres are ready to use, supplied to order and have an indefinite shelf life.

SPECIAL PROPERTIES:

* Available in lengths and diameters of 12mm/0.4mm, 25mm/0.6mm and 35mm/0.7mm.
* Fibres are made of stainless steel which is strong, tough and wear resistant.
* Quickly and easily dispersed without bundling to produce workable mixes.
* To produce steel reinforced concrete without the use of steel reinforcing or mesh.
* To minimise shrinkage, reduce or eliminate both plastic and long term shrinkage.
* Fibres prevent cracking to produce impermeable and durable cementitious products.
* Produces concrete which is stronger in compression. flexion and tension.
* The fibres are non absorbent, chemically resistant and will not degrade with time.
* To enhance the resistance of concrete against heat, impact, shock, abrasion, wear and tear.
* Economical, non flammable, non toxic, odour free, user friendly and safe to use.

USES:

+ For use in concrete placed in heavy engineering and railway workshops and shipyards.
+ For concrete placed in heavy and massive machine assembly plants and factories.
+ To produce wear resistant concrete where there is heavy and frequent vehicular traffic.
+ In areas where the traffic is steel wheeled or moves on caterpillars.
+ To repair and protect concrete against loading buckets, shovels and grabs.
+ To produce high flexural and high tensile strength concrete and flooring materials.
+ To eliminate shrinkage, cracking and crazing in cementitious screeds, thin toppings and coatings.
+ For corrosion free, marine concrete, sea defences, harbours, jetties, docks and locks.
+ A substitute for steel reinforcing cages, mesh and rods in the fabrication of reinforced concrete.
+ To produce high strength, fracture resistant, precast concrete products such as manhole rings and covers, frames, posts, kerbs, tiles and slabs.
+ For use in refractory concrete, kilns, ovens, chimneys, gasifers and pizza oven concrete

MIXING INSTRUCTIONS:

ROCKBOND STAINLESS STEEL FIBRE reinforced mixes are mixed with water using a ROCKBOND CONCRETE STIRRER (RB CS), an electric power tool (1kW) and a ROCKBOND 25 LITRE MIXING CONTAINER (RB 25LMC). Use a ROCKBOND FORCED ACTION PAN MIXER (RB FAPM) to mix larger amounts of material.

Start the mixer, add the appropriate amount of water, add the ingredients of the mix, and mix until homogeneous. ROCKBOND STAINLESS STEEL FIBRES are added to cementitious mixes at the end of the mix. The dosage rate is normally 10% by weight of cement contained in the mix: 10kg of ROCKBOND STAINLESS STEEL FIBRE per 100kg of cement. Slowly add the fibres to the mix, and mix until homogeneous.

Registered Office: Newton's Farm Estate, Wissington, Nayland, Suffolk, CO6 4LX
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ROCKBOND STAINLESS STEEL FIBRES (RB SSF) CONTINUED…

APPLICATION PROCEDURE:

For the application of renders, mortars or concrete to be placed on cementitious or brick surfaces, careful and proper preparation of the substrate is essential if a successful material is to remain in place. Abrade the surface where necessary to produce a sound substrate with a good mechanical key. All traces of contamination must be removed.

On weak, friable or porous substrates, use the ROCKBOND PRIMER LATEX (RB PL) to penetrate, consolidate, strengthen and seal the surface. With a brush or a soft broom, brush the latex completely and evenly over the surface. Work the latex well into the substrate. Pay particular attention to the edges of the repair, and brush the liquid at least 25mm beyond the perimeter of the area to be covered. Let the latex dry out, usually 15 to 20 minutes depending on conditions.

To prime the substrate and to enhance the bond, apply a second coat of the latex to the first coat. Normally, 1 litre of the ROCKBOND PRIMER LATEX will treat 5m² of concrete surface with a two coat application. If the Rockbond Primer Latex is not used, then wet and soak the substrate surface for a few minutes prior to placing the reinforced product and remove any standing water.

TECHNICAL DATA:

Tests have shown that ROCKBOND STAINLESS STEEL FIBRES added by weight to a 1:2:2, Portland cement: sand: 10mm aggregate mix, improves the flexural strength of the concrete:

Flexural strength at 0% fibre content by weight of cement:	3.5N/mm^2	
Flexural strength at 10% fibre content by weight of cement:	3.9N/mm^2	11% increase
Flexural strength at 20% fibre content by weight of cement:	5.3N/mm^2	51% increase
Flexural strength at 30% fibre content by weight of cement:	6.7N/mm^2	91% increase

HEALTH, SAFETY AND STORAGE:

ROCKBOND STAINLESS STEEL FIBRES are safe to use. However, wear goggles, protective clothing and a dust mask while mixing and applying cementitious materials that are stainless steel fibre reinforced. Please note the ends of the fibres are SHARP and can puncture the skin and eyes. Consult the relevant MSDS for further details. Store in a cool, dry, dark place.

FURTHER INFORMATION:

Should you require further information on this product, or details of other ROCKBOND SPECIAL CONCRETE PRODUCTS, then please do contact our Technical Department:

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IMPORTANT NOTE:

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